Remarks

Claims 6-24 were pending. Due to the restriction requirement, claims 13-17 and 20 are cancelled without prejudice. Claims 25-26 are added. Therefore, claims 6-12, 18, 19, and 21-26 are now pending.

Support for the claim amendments and new claims can be found throughout the specification, for example:

Claim 6: page 7, lines 12-15; page 21, lines 1-20; page 26, lines 23-30; and FIG. 2.

Claims 11 and 22: amended to correct antecedent basis.

Claim 18: page 55, lines 26-27 and page 56, line 6.

Claim 25: page 29, line 3 and lines 14-20.

Claims 26 and 27: page 26, lines 23-30 and page 53, lines 9-21.

The specification has been amended to include references to sequence identifiers, and to include a sequence listing that includes the sequence shown on page 54, line 18.

No new matter is added by this amendment. No amendments were made to distinguish prior art.

Information Disclosure Statement (IDS)

An initialed 1449 form was not received for the IDS filed on April 8, 2005. A copy of the IDS as filed is enclosed as Exhibit A, along with the post card received back from the USPTO. Applicants request that the Examiner initial and return the 1449 form.

Compliance with 37 C.F.R. § 1.821(d)

The specification has been amended to include sequence identifiers in the Brief Description of the Drawings, to refer to sequences found in FIG. 1A.

35 U.S.C. § 112, first paragraph

Claims 6-12, 18 and 21-24 are rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description and enablement requirements. Although Applicants disagree, in order to expedite prosecution the claims have been amended as follows:

Claim 6 has been amended to clarify that the target cell and the CD4 positive cell express CCR5, and to clarify that the binding or blocking agent can include a chemokine, an anti-CC5 antibody or epitope binding fragment thereof, or a peptide corresponding to an extracellular loop of CCR5.

Due to the restriction requirement, claim 18 has been amended to clarify that the agent suppresses the HIV-1 coreceptor activity of CCR5. Therefore, the agent administered need only suppress this biological activity of CCR5, and not necessarily suppress CCR5 expression. In addition, claim 21 has been amended to clarify that the agent is delivered to the cell. This language therefore provides that the agent can contact the cell surface to have the desired effect.

In view of these amendments, Applicants request that the 35 U.S.C. § 112, first paragraph rejections be withdrawn.

35 U.S.C. § 112, second paragraph

Claims 11, 18, 19 and 21-24 are rejected under 35 U.S.C. § 112, second paragraph as indefinite. Applicants request reconsideration.

Claim 11 has been amended to depend from claim 10, so there is now antecedent basis for "the anti-CCR5 antibody."

Claim 18 has been amended to clarify that "suppresses" refers to suppression of HIV-1 coreceptor activity.

Claim 22 has been amended to depend from claim 21, so there is now antecedent basis for "the carrier."

In view of these amendments, Applicants request that the 35 U.S.C. § 112, second paragraph rejections be withdrawn.

35 U.S.C. § 102(e)

Claims 6-12, 18, 19, and 23-24 are rejected under 35 U.S.C. § 102(e) as allegedly being clearly anticipated by the Allaway *et al.* patent (U.S. Patent No. 6,344,545).

It is believed that claims 6-12, 18, 19, and 23-24 contain subject matter that overlaps with a claim of U.S. Patent No. 6,344,545 issued February 5, 2002. Applicants wish to point out to the Examiner that according to MPEP 715.05, "[w]hen the reference in question is a noncommonly owned U.S. patent or patent application publication claiming the same invention as applicant and its publication date is less then 1 year prior to the presentation of claims to that invention in the application being examined, applicant's remedy, if any, must be by way of 37 C.F.R. 41.202 instead of 37 C.F.R. 1.131. If the reference is claiming the same invention as the application and its publication date is less than 1 year prior to the presentation of claims to that invention in the application, this fact should be noted in the Office action. The reference can then be overcome only by way of interference."

35 U.S.C. § 103(a)

Claims 6, 9, 18 and 23-24 are rejected under 35 U.S.C. § 103(a) as unpatentable over Cocchi *et al.* (*Science* 270:1811-5, 1995). Applicants disagree and request reconsideration.

To establish a *prima facie* case of obviousness, three criteria must be satisfied: (1) suggestion or motivation to modify the reference, (2) reasonable expectation of success, and (3) the prior art reference must teach or suggest all the claim limitations. In addition, the teaching or suggestion to make the modification and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. MPEP 2143. The Office action in this case has failed to establish the *prima facie* case of obviousness, and therefore Applicants request that the rejection be withdrawn.

There is no suggestion or motivation to modify the Cocchi *et al.* document, to arrive at the claimed invention. Since there is no teaching or suggestion in Cocchi *et al.* that RANTES, MIP1-α, and MIP1-β are ligands of CCR5, there is no motivation in Cocchi *et al.* to inhibit membrane fusion between HIV and a cell that expresses CCR5 by using an agent that blocks or binds CCR5, for example by using RANTES, MIP1-α, or MIP1-β.

Similarly, there is no reasonable expectation of success in achieving inhibition of membrane fusion between HIV and a cell that expresses CCR5 by using a chemokine, since it was not known by Cocchi *et al.* (as evidenced by the lack of teaching or suggestion therein), that the RANTES, MIP1-α, and MIP1-β chemokines are ligands of CCR5.

Cocchi *et al.* fail to disclose all of the limitations of the claims, and no other documents are cited. Cocchi *et al.* do not disclose or suggest that agents that bind or block CCR5 can be used to inhibit membrane fusion between HIV and a cell that expresses CCR5. This is because Cocchi *et al.* did not know the mechanism of action of RANTES, MIP1-α, and MIP-1β.

Although Cocchi *et al.* disclosed that RANTES, MIP1-α, and MIP-1β, are HIV-suppressive factors, the mechanism of action of these cytokines was not taught or suggested by this document. Since Cocchi *et al.* do not disclose or suggest that RANTES, MIP1-α, and MIP1-β are CCR5 ligands, this reference does render obvious that agents that bind or block CCR5 could be used to inhibit membrane fusion between HIV and a cell that expresses CCR5.

Because the Office action does not establish a *prime facie* case of obviousness, Applicants believe that the 35 U.S.C. § 103(a) rejection is improper and request that it be withdrawn.

Conclusion

Since Applicants believe that the amendments are sufficient to overcome the 35 U.S.C. § 112 rejections, and that the arguments are sufficient to overcome the Cocchi *et al.* reference, the rejection under 35 U.S.C. § 102(e) should be the only outstanding rejection. Thus, Applicants respectfully request that the Examiner note this in the next Office action and allow Applicants to provide evidence under 37 C.F.R. 41.202 in order to enter interference proceedings.

If there are any questions regarding this amendment, or if only minor issues remain prior to entering interference proceedings, the Examiner is invited and encouraged to telephone the undersigned.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

One World Trade Center, Suite 1600
121 S.W. Salmon Street
Portland, Oregon 97204
Telephone: (503) 595-5300
Facsimile: (503) 595-5301

By _____
Sheree Lynn Rybak, Ph.D.
Registration No. 47,913